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DATE: Wednesday, May 26, 2004

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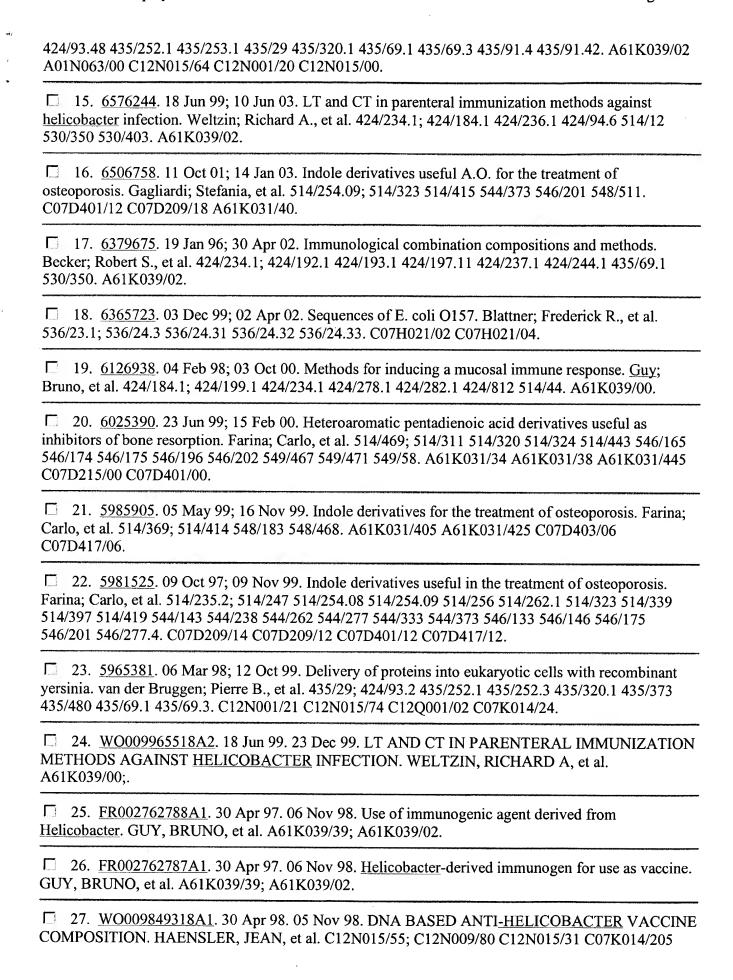
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## Search Results - Record(s) 1 through 36 of 36 returned.

☐ 1. 20040072239. 24 Sep 03. 15 Apr 04. Method for controlling the microbiological quality of an aqueous medium and kit therefor. Renaud, Patricia, et al. 435/7.1; G01N033/53.
2. 20040033240. 09 Jun 03. 19 Feb 04. Immunological combinations for prophylaxis and therapy of helicobacter pylori infection. Guy, Bruno, et al. 424/234.1; A61K039/02.
☐ 3. <u>20040010012</u> . 20 Nov 02. 15 Jan 04. Indole derivatives for the treatment of osteoporosis. Farina, Carlo, et al. 514/323; 514/414 514/419 546/201 548/465 548/494 A61K031/454 A61K031/405 C07D43/02 C07D209/02.
4. 20030143558. 28 May 02. 31 Jul 03. Methods for attenuation of virulence in bacteria. Mitchell, Wayne, et al. 435/6; 702/20 C12Q001/68 G06F019/00 G01N033/48 G01N033/50.
☐ 5. <u>20030023075</u> . 01 Apr 02. 30 Jan 03. Novel sequences of E. coli O157. Blattner, Frederick R., et al. 536/23.7; 435/6 C12Q001/68 C07H021/04.
6. 20020173659. 04 Dec 01. 21 Nov 02. Indole derivatives for the treatment of osteoporosis. Farina, Carlo, et al. 546/201; 548/507 C07D41/02 A61K031/454 A61K031/405 C07D209/10.
7. 20020132833. 03 Apr 01. 19 Sep 02. Caspase inhibitors and uses thereof. Golec, Julian M.C., et al. 514/354; 514/423 514/448 514/563 546/316 548/537 549/72 562/448 A61K031/455 A61K031/401 A61K031/381 A61K031/195 C07D333/22 C07D213/56.
8. 20020131983. 12 Mar 02. 19 Sep 02. Immunological combination compositions and methods. Becker, Robert S., et al. 424/234.1; 514/21 514/44 A61K048/00 A61K039/02 A61K038/17.
9. <u>20020099080</u> . 11 Oct 01. 25 Jul 02. Indole derivatives useful A.O. for the treatment of osteoporosis. Gagliardi, Stefania, et al. 514/339; 514/411 514/414 514/415 546/277.4 548/429 548/465 548/511 C07D41/02 C07D471/04 A61K031/4439 A61K031/407 A61K031/404.
☐ 10. <u>20020045623</u> . 07 Jun 01. 18 Apr 02. Caspase inhibitors and uses thereof. Charrier, Jean-Damien, et al. 514/249; 544/234 A61K031/5025 C07D487/04.
11. 20020001804. 23 Feb 01. 03 Jan 02. Genomic analysis of tRNA gene sets. Mitchell, Wayne, et al. 435/6; 702/20 C12Q001/68 G06F019/00 G01N033/48 G01N033/50.
12. <u>20010049103</u> . 23 Feb 01. 06 Dec 01. Platform for the discovery of the bacterial genes involved in RNA modification. Roberts, T. <u>Guy</u> , et al. 435/6; 435/4 536/23.7 C12Q001/68 C12Q001/00 C07H021/04.
☐ 13. <u>6632962</u> . 03 Apr 01; 14 Oct 03. Caspase inhibitors and uses thereof. Golec; Julian M. C., et al. 562/450; 560/41. C07C061/12.
14. <u>6602506</u> . 25 May 99; 05 Aug 03. Delivery of proteins into eukaryotic cells with recombinant Yersinia. van der Bruggen; Pierre B., et al. 424/200.1; 424/184.1 424/234.1 424/93.2 424/93.4



A61K031/70.				
☐ 28. <u>WO009848836A1</u> . 30 Apr 98. 05 Nov 98. ANTI- <u>HELICOBACTER</u> VA COMPOSITION COMPRISING A TH1 ADJUVANT. GUY, BRUNO, et al. A61				
29. <u>WO009848835A1</u> . 30 Apr 98. 05 Nov 98. ANTI-HELICOBACTER VA COMPOSITION FOR USE BY THE SUBDIAPHRAGMATIC SYSTEMIC ROUCOMBINED MUCOSAL/PARENTERAL IMMUNIZATION METHOD. GUY, IA61K039/02; A01N043/04 A61K031/70.	JTE, AND			
30. <u>US 6576244B</u> . Inducing immune response to <u>Helicobacter</u> useful for treapylori infection, by administering immunogenic <u>Helicobacter</u> polypeptide admixed heat-liable toxin of Escherichia coli. <u>GUY</u> , B, et al. A61K039/02.	ating <u>Helicobacter</u> d with adjuvant having			
31. WO 200205845A. Multivalent composition useful as vaccine for prophy Helicobacter infection, has at least two components from AlpA, catalase, urease, 5 proteins or nucleic acids encoding them. GUY, B, et al. A61K039/02 A61K039/10	525 protease and 76K			
32. WO 9965518A. Use of a Helicobacter antigen and an Escherichia coli er inducing an immune response against Helicobacter. GUY, B, et al. A61K039/00 A A61K039/106 A61K039/39 A61P031/04 A61P043/00.				
☐ 33. WO 9849318A. Vaccine containing DNA that encodes Helicobacter antiresponse, for treatment or prevention of infection and related diseases. GIRERD-CA61K031/70 C07K014/205 C12N009/80 C12N015/31 C12N015/55.				
☐ 34. WO 9848836A. Helicobacter-derived immunogen for use as vaccine - co Quillaja saponaria, cationic lipid and/or glyco-lipo-peptide as adjuvant. GUY, B, e A61K039/106 A61K039/39 A61K045/00 A61K047/00 A61P031/04 A61K039/02 A61K047:42.	et al. A61K039/02			
35. WO 9848835A. Use of immunogenic agent derived from Helicobacter composition for induction of T-helper type immune response against Helicobacter GUY, B, et al. A01B001/00 A01N043/04 A61K000/00 A61K031/70 A61K031/70 A61K039/00 A61K039/02 A61K039/39 A61P001/00 A61P031/04 A61K039/02 A61K047:42 A61K039/02 A61K047:48.	infection in mammal. 052 A61K038/16			
36. <u>US 6126938A</u> . Compsns. for inducing mucosal immune response - compantigenic components for admin. by different routes. <u>GUY</u> , B, et al. A61K038/43 A61K039/02 A61K039/07 A61K039/106 A61K039/385 A61K039/39 A61P001/06 C12N015/57.	A61K039/00			
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### First Hit

L2: Entry 1 of 36

File: PGPB

Apr 15, 2004

PGPUB-DOCUMENT-NUMBER: 20040072239

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20040072239 A1

TITLE: Method for controlling the microbiological quality of an aqueous medium and kit therefor

PUBLICATION-DATE: April 15, 2004

INVENTOR - INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Renaud, Patricia	Le Pecq		FR	
Guillot, Emmanuelle	Saint Germain En Laye		FR	
Mabilat, Claude	Saint Germain Au Mont D'or		FR	
Vachon, Carole	Villeurbanne		FR	
Lacroix, Bruno	Saint Genis Laval		FR	
Vernet, <u>Guy</u>	Albigny Sur Saone		FR	
Charvieu, Marie-Astrid	Charvagneux		FR	
Laffaire, Philippe	Tignieu Jameyzieu		FR	

APPL-NO: 10/ 332123 [PALM] DATE FILED: September 24, 2003

FOREIGN-APPL-PRIORITY-DATA:

COUNTRY APPL-NO

DOC-ID

APPL-DATE

FR 00/08839 2000FR-00/08839 July 6, 2000

PCT-DATA:

DATE-FILED APPL-NO PUB-NO PUB-DATE 371-DATE 102(E)-DATE

Jul 6, 2001 PCT/FR01/02191

INT-CL: [07] G01 N 33/53

US-CL-PUBLISHED: 435/007.1 US-CL-CURRENT: 435/7.1

REPRESENTATIVE-FIGURES: NONE

#### ABSTRACT:

The invention concerns a method for controlling the microbiological quality of an environmental aqueous medium, suspected of containing various micro-organisms, comprising the following steps: selecting a reference set, consisting of at least three micro-organisms, representing jointly or separately, a microbiological quality level; providing a microbiological detection kit, consisting of at least

three probes specifically and respectively identifying said three micro-organisms; after treating the medium to be analysed, contacting said micro-organisms, or any fraction thereof derived from the medium to be analysed therefrom, with said detection kit, whereby a multiple determination of said micro-organisms is carried out, said determination representing the microbiological quality level of the medium. The invention also concerns an appropriate microbiological detection kit for for implementing said method.

First Hit



File: PGPB Feb 19, 2004

PGPUB-DOCUMENT-NUMBER: 20040033240

PGPUB-FILING-TYPE: new

L3: Entry 2 of 10

DOCUMENT-IDENTIFIER: US 20040033240 A1

TITLE: Immunological combinations for prophylaxis and therapy of helicobacter pylori

pylori infection

PUBLICATION-DATE: February 19, 2004

INVENTOR-INFORMATION:

NAME CITY STATE COUNTRY RULE-47

Guy, Bruno Lyon FR Haensler, Jean Pollionnay FR

US-CL-CURRENT: 424/234.1

#### CLAIMS:

- 1. A composition comprising at least a first and second immunogenic Helicobacter components in a combined amount effective to generate a protective anti-Helicobacter immune response upon administration to an animal at risk of a Helicobacter infection, wherein said at least first and second immunogenic Helicobacter components are independently selected from the group consisting of: a) the Helicobacter AlpA protein or a peptide from said Helicobacter AlpA protein, or a a nucleic acid that encodes said Helicobacter AlpA protein or peptide; b) the Helicobacter catalase protein or a peptide from said Helicobacter catalase protein, or a nucleic acid that encodes said Helicobacter catalase protein or peptide; c) the the Helicobacter 76K protein or a peptide from said Helicobacter 76K protein, or a nucleic acid that encodes said Helicobacter 76K protein or peptide; d) the Helicobacter 525 protease or a peptide from said Helicobacter 525 protease, or a nucleic acid that encodes said Helicobacter 525 protease or peptide; and e) the Helicobacter urease or a peptide from said Helicobacter urease, or a nucleic acid that encodes said Helicobacter urease or peptide; provided that said first and second immunogenic Helicobacter components are different from each other.
- 2. The composition according to claim 1, further comprising a third immunogenic <a href="Helicobacter">Helicobacter</a> component which is independently selected from the group consisting of (a), (b), (c), (d) and (e) as defined in claim 1; provided that said third immunogenic <a href="Helicobacter">Helicobacter</a> component is different from said first and second immunogenic <a href="Helicobacter">Helicobacter</a> components.
- 3. The composition according to claim 2, further comprising a fourth immunogenic <a href="Helicobacter"><u>Helicobacter</u></a> component which is independently selected from the group consisting of (a), (b), (c), (d) and (e) as defined in claim 1; provided that said fourth immunogenic <a href="Helicobacter"><u>Helicobacter</u></a> component is different from said first, second and third immunogenic <a href="Helicobacter"><u>Helicobacter</u></a> components.
- 4. The composition according to claim 3, further comprising a fifth immunogenic

- Helicobacter component which is independently selected from the group consisting of (a), (b), (c), (d) and (e) as defined in claim 1; provided that said fifth immunogenic Helicobacter component is different from said first, second, third and fourth immunogenic Helicobacter components.
- 5. The composition according to any one of claims 1 to 4, wherein the 76K protein is BabB.
- 6. The composition according to any one of claims 1 to 5, further comprising an adjuvant.
- 7. The composition according to claim 6, wherein the adjuvant is a balanced Th1/Th2 adjuvant.
- 8. The composition according to claim 7, wherein the adjuvant is DC-Chol.
- 9. A composition comprising, in a combined amount effective to generate a significant therapeutic anti-Helicobacter immune response upon administration to an animal having a Helicobacter infection: (a) the Helicobacter 76K protein or a peptide from said Helicobacter 76K protein; or a nucleic acid that encodes said Helicobacter 76K protein or peptide; or an antibody, or antigen binding fragment thereof that binds to said Helicobacter 76K protein or peptide; (b) the Helicobacter catalase or a peptide from said Helicobacter catalase; or a nucleic acid that encodes said Helicobacter catalase or peptide; or an antibody, or antigen binding fragment thereof that binds to said Helicobacter catalase or peptide; and (c) the Helicobacter 525 protease or a peptide from said Helicobacter 525 protease; or a nucleic acid that encodes said Helicobacter 525 protease or peptide; or an antibody, or antigen binding fragment thereof, that binds to said Helicobacter 525 protease or peptide.
- 10. The composition according to claim 9, further comprising a fourth immunogenic Helicobacter component which is selected from the group consisting of: (a) the Helicobacter urease or a peptide from said Helicobacter urease; or a nucleic acid that encodes said Helicobacter urease or peptide; or an antibody, or antigen binding binding fragment thereof that binds to said Helicobacter urease or peptide; and (b) the Helicobacter AlpA protein or a peptide from said Helicobacter AlpA protein; or a a nucleic acid that encodes said Helicobacter AlpA protein or peptide; or an antibody, or antigen binding fragment thereof, that binds to said Helicobacter AlpA protein or peptide.
- 11. A composition comprising at least a first and second immunogenic Helicobacter component in a combined amount effective to generate a significant therapeutic anti-Helicobacter immune response upon administration to an animal having a Helicobacter infection, wherein: (a) said at least first immunogenic Helicobacter component is the Helicobacter AlpA protein or a peptide from said Helicobacter AlpA protein; or a nucleic acid that encodes said Helicobacter AlpA protein or peptide; or an antibody, or antigen binding fragment thereof, that binds to said Helicobacter AlpA protein or peptide; and (b) said at least second immunogenic Helicobacter component is (i) the Helicobacter 76K protein or a peptide from said Helicobacter 76K protein; or a nucleic acid that encodes said Helicobacter 76K protein or peptide; or an antibody, or antigen binding fragment thereof, that binds to said Helicobacter 76K protein or peptide or (ii) Helicobacter catalase or a peptide from said Helicobacter catalase; or a nucleic acid that encodes said Helicobacter catalase or peptide; or an antibody, or antigen binding fragment thereof that binds to said Helicobacter catalase or peptide.
- 12. The composition according to any one of claims 9 to 11, wherein the 76K protein is BabB.

13. The composition according to any one of claims 9 to 12, further comprising an adjuvant.

- 14. The composition according to claim 13, wherein the adjuvant is a balanced Th1/Th2 adjuvant.
- 15. The composition according to claim 14, wherein the adjuvant is DC-Chol.
- 16. A vaccine comprising the composition according to any one of claims 1 to 15, in a pharmaceutically acceptable excipient.
- 17. The use of a composition according to any one of claims 1 to 8, in the preparation of a vaccine for protecting an animal against Helicobacter infection.
- 18. The use of a composition according to any one of claims 9 to 15, in the preparation of a vaccine for treating <a href="Helicobacter">Helicobacter</a> infection in an animal.

### First Hit Fwd Refs



L3: Entry 7 of 10

File: USPT

Oct 3, 2000

DOCUMENT-IDENTIFIER: US 6126938 A

TITLE: Methods for inducing a mucosal immune response

## INVENTOR (1):

Guy; Bruno

#### Brief Summary Text (15):

Recently, Czinn et al., Vaccine (1993) 11: 637 have proposed in outline a method of vaccination against <a href="Helicobacter pylori">Helicobacter pylori</a>, the pathogenic agent of a large number of stomach ulcers. Germ-free mice received a sonicate of H. felis with cholera toxin as adjuvant, via the intragastric route (sonicate administered directly by intubation into the stomach). After a challenge with H. felis, the immunized mice are found to have been protected.

### Brief Summary Text (63):

According to a preferred embodiment, the antigen of a bacterium which is pathogenic for the host mammal is an H. <a href="pylori">pylori</a> urease or one of the subunits ureA or ureB of this same urease.

### Brief Summary Text (64):

More generally from the standpoint of the method of immunization, and at the same time more precisely targeted from the standpoint of the antigen, it may be pointed out that the subject of the invention is also the use of a DNA fragment coding for an H. <a href="pylori">pylori</a> antigen in the manufacture of a composition for preventing or treating an H. <a href="pylori">pylori</a> infection, and for nasal or nasobuccal administration. To this end, the the DNA fragment used as vaccination agent meets the criteria stated above.

### Brief Summary Text (68):

Such a composition, when it comprises an antigen of a pathogenic organism which infects the gastric or intestinal mucosa, is useful, in particular, in that it protects the host mammal against the infection in question, in particular affording long-lasting protection, bringing into play memory T and B lymphocytes. Possible infections are those caused by H. <a href="mailto:pylori">pylori</a>, V. cholerae, Shigella flexneri, Shigella sonnei, Salmonella enteritidis, Clostridium difficile, Yersinia enterocolitica, and enterotoxigenic and enteropathogenic E. coli. As regards the antigen, the latter can be the pathogenic agent itself in killed, lysed or attenuated form, or alternatively antigenic components of this pathogen, such as a capsular polysaccharide, or membrane antigens in purified form, or a polypeptide characteristic of this pathogen, either directly purified from the pathogen or obtained by recombinant DNA techniques.

### Brief Summary Text (69):

For example, in the case of a composition for preventing H. <a href="pylori">pylori</a> infections, an antigen of choice may be the apoenzyme of the urease, composed of the subunits A and B, for which the corresponding DNA fragments are described in, e.g., Labigne et al., J. Bact. (1991) 173 (6): 1920, or one of the subunits of the apoenzyme, or the cytotoxin (WO93/18150), or alternatively proteins of the adhesin family (proteins capable of binding to the receptors of the host cells and which become capable of mediating a coupling of the pathogen to the host cells and of initiating

the infectious process), or iron-regulated proteins.

### Drawing Description Text (6):

FIG. 5 depicts the plasmid pTG8665, used to produce the apoenzyme of H. <a href="mailto:pylori">pylori</a> urease.

#### Drawing Description Text (11):

FIG. 10 depicts in diagrammatic form the optical density of the gastric medium of mice after immunization, where appropriate, with the apoenzyme of H. <u>pylori</u> urease and challenge. First column: uninfected mice; second column: mice which have received empty liposomes, by subcutaneous primary immunization followed by two boosters via the (nasal+intragastric) routes; third column: mice which have received liposomes with urease, by subcutaneous primary immunization followed by two boosters via the (nasal+intragastric) routes; fourth column: mice which have received liposomes with urease, by administration repeated three times via the (nasal+intragastric) routes. In all cases, DC-Chol liposomes are used.

### Detailed Description Text (44):

16.4 mg of a <u>lipid</u> mixture composed of cholesterol (Sigma), dipalmitoylphosphatidyl-dipalmitoylphosphatidyl-choline (Nattermann Phospholipids) and dimyristoylphosphatidylglycerol sodium salt in molar proportions of 5:4:1 are dissolved in 50 .mu.l of absolute ethanol. The solution is injected via a Hamilton syringe into 2 ml of an aqueous solution containing 4 mg/ml of jack bean urease, where appropriate buffered with PBS buffer diluted to 1/10. The preparation is kept stirring at 45.degree. C.

### Detailed Description Text (45):

On contact with water, the <u>lipids</u> organize spontaneously in the form of liposomes (predominantly unilamellar liposomes of average size 50-100 nm), trapping a certain volume of urease solution.

### Detailed Description Text (49):

16.4 mg of a lipid mixture composed of cholesterol (Sigma), dipalmitoylphosphatidyldipalmitoylphosphatidyl-choline (Nattermann Phospholipids) and dimyristoylphosphatidylglycerol sodium salt in molar proportions of 5:4:1 are dissolved in 4 ml of chloroform in a 25 ml round-bottomed pyrex flask. The solution is evaporated (Buchi Rotavapor) to form a thin <a href="lipid">lipid</a> film on the walls of the flask. The lipid film is dried under a high vacuum for 2 hours and then taken up with 2 ml of water containing 8 mg of jack bean urease. After 4 hours of stirring at 45 degree. C., the suspension is extruded (Extruder.TM., Lipex Biomembranes Inc., Vancouver) 5 times through 2 superposed polycarbonate membranes of porosity 400 nm (Nucleopore.TM., Costar) to form a homogeneous population of predominantly unilamellar liposomes approximately 400 nm in diameter containing urease. These liposomes are purified (isolated from excess free urease) by gel filtration through a column of Sepharose CL-4B (Pharmacia). The degree of encapsulation of the urease, measured using iodine-125-labelled urease (Enzymobeads.TM. labelling technique, Biorad), varies from 5 to 10%. If necessary, the liposome suspension is concentrated by ultrafiltration in a Novacell.TM. cell (Filtron) possessing an exclusion limit of 10 kD.

### Detailed Description Text (51):

82 mg of <u>lipid</u> mixture composed of cholesterol, dipalmitoylphosphatidylcholine and dimyristoylphosphatidylglycerol sodium salt in molar proportions of 5:4:1, obtained by lyophilization of an ethanolic solution (D3F --France), are taken up with 10 ml of 10 mM Hepes buffer, 150 mM NaCl, pH 7.4 containing 3.6 mg/ml of the recombinant apoenzyme form of H. <u>pylori</u> urease. After 4 hours of stirring at 45.degree. C., the suspension is microfluidized by 5 runs at 500 kPa in an M110S microfluidizer (Microfluidics Co.) to form a homogeneous population of predominantly unilamellar liposomes approximately 100 nm in diameter containing urease. These liposomes are purified by gel filtration (column of Sepharose CL-4B, Pharmacia). The degree of

encapsulation of the urease, measured by protein assay using the Micro BCA kit (Pierce) is 14.5%. If necessary, the liposome suspension is concentrated by ultrafiltration in a Novacell cell (Filtron) possessing an exclusion limit of 10 kD. kD.

### Detailed Description Text (53):

When liposomes are prepared, MPLA (extracted from E. coli, Sigma) may be added to the lipid mixture, in the proportion of 1, 2 or 5% relative to the mass of <u>lipid</u>.

### Detailed Description Text (68):

Vaccination kit for H. pylori infections

### Detailed Description Text (69):

Three preparations containing the apoenzyme of H. <a href="pylori">pylori</a> urease, each formulated in a different way depending on the method of administration envisaged, are brought together in a kit.

### Detailed Description Text (106):

The apoenzyme form of H. <u>pylori</u> urease is encapsulated in liposomes. These liposomes liposomes have an average diameter of 100 nm and a protein content of 60 .mu.g/mg of lipid.

### Detailed Description Text (114):

Vaccination kits for H. <u>pylori</u> infections (DNA coding for the urease subunit ureB, used as vaccinating agent)

### Detailed Description Text (140):

On days 14, 35 and 56, serum samples are drawn from each of the mice. The production of anti-urease antibodies is tested for by ELISA (a purified soluble extract of H. pylori is used).

### Detailed Description Text (143):

Induction of a mucosal immune response against H. pylori urease

### Detailed Description Text (145):

0.8 g of DC-Chol and 2.4 g of dioleoylphosphatidycholine (DOPC) are added to 20 ml of chloroform in a 1 liter round-bottomed flask. This mixture is evaporated under vacuum so as to form a <u>lipid</u> film on the walls of the flask. This film is then dried dried under a high vacuum overnight.

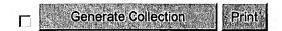
### Detailed Description Text (156):

15 days after the last administration, the mice are challenged by intragastric gavage with 10.sup.8 microbes of an H. <u>pylori</u> strain adapted to mice. One month after challenge, the stomachs are removed and a test of urease activity (Jatrox ND) is performed on 1/4 of the stomach. 4 hours after removal, the optical density of the medium is measured at 550 nm. The results are presented in FIG. 10.

#### CLAIMS:

- 7. A method according to claim 6, wherein the antigen is Heliiobacter <a href="pylori">pylori</a> antigen.
- 8. A method according to claim 7, wherein the antigen is the apoenzyme form of H. pylori urease.
- 10. A method according to claim 9, wherein the antigen is  $\underline{\text{Helicobacter pylori}}$  antigen.
- 11. A method according to claim 10, wherein the antigen is the apoenzyme form of H. pylori urease.

### First Hit Fwd Refs



L3: Entry 7 of 10

File: USPT

Oct 3, 2000

US-PAT-NO: 6126938

DOCUMENT-IDENTIFIER: US 6126938 A

TITLE: Methods for inducing a mucosal immune response

DATE-ISSUED: October 3, 2000

INVENTOR - INFORMATION:

NAME CITY STATE ZIP CODE COUNTRY

Guy; BrunoLyonsFRHaensler; JeanSaint-Genis-les-OllieresFRQuentin-Millet; Marie-JoseVilleurbanneFR

US-CL-CURRENT: 424/184.1; 424/199.1, 424/234.1, 424/278.1, 424/282.1, 424/812,

514/44

#### CLAIMS:

### What is claimed is:

1. A method for inducing in a mammal, an immune response against an antigen of a pathogen of the respiratory, gastrointestinal, or genitourinary tract at mucosal effector site, which comprises administering a second and a third inducing agent, to said mammal;

wherein said second and third inducing agents are selected independently from the group consisting of the antigen and, provided the antigen is a protein, an expression cassette capable of expressing the antigen in said mammal;

wherein said second inducing agent is administered concomitantly with or prior to the third inducing agent;

wherein said second inducing agent is administered by the nasal or buccal route so that the second inducing agent is targeted to the inducer site(s) for an immune response in the naso-oropharynx or the salivary glands; and

wherein said third inducing agent is administered by a mucosal route other than the nasal route so that the antigen is targeted to the inducer site(s) for the immune response at the effector site at which the immune response is sought.

- 2. A method according to claim 1, wherein the antigen is a protein.
- 3. A method according to claim 2, wherein said inducing agent is selected from the group consisting of the antigen and an expression cassette comprising DNA encoding the antigen.

- 4. A method according to claim 1, wherein the third product is formulated for pulmonary administration.
- 5. A method according to claim 1, wherein the third product is formulated for urogenital administration.
- 6. A method according to claim 1, wherein the third product is formulated for oral administration.
- 7. A method according to claim 6, wherein the antigen is Heliiobacter pylori antigen.
- 8. A method according to claim 7, wherein the antigen is the apoenzyme form of H. pylori urease.
- 9. A method according to claim 1, wherein the third product is formulated for intragastric administration.
- 10. A method according to claim 9, wherein the antigen is Helicobacter pylori antigen.
- 11. A method according to claim 10, wherein the antigen is the apoenzyme form of H. <u>pylori</u> urease.
- 12. A method according to claim 1, wherein the first product further comprises an adjuvant selected from the group consisting of aluminum hydroxide, aluminum phosphate, and ISCOMs.
- 13. A method according to claim 1, wherein the second product comprises particles selected from the group consisting of liposomes and microspheres.
- 14. A method according to claim 13, wherein the particles are from about 0.05 .mu.m to about 5 .mu.m in diameter.
- 15. A method according to claim 1, wherein the third product comprises particles selected from the group consisting of liposomes and microspheres, and further wherein said third product is formulated for pulmonary, oral, or intragastric administration.
- 16. A method according to claim 15, wherein the third product comprises particles from about 0.05 to about 5 .mu.m in diameter, and is formulated for pulmonary administration.
- 17. A method according to claim 16, wherein the second or third product is a spray or an aerosol.
- 18. A method according to claim 15, wherein the third product comprises particles from about 0.05 to about 5 .mu.m in diameter, and is formulated for oral or intragastric administration.
- 19. A method according to claim 1, wherein the third product is an enterically protected preparation.
- 20. A method according to claim 1, wherein the second or third product further comprises a non-toxic adjuvant, other than the non-toxic subunits or the detoxified forms of bacterial toxins and other than liposomes or microspheres.

- 21. A method according to claim 1, wherein the second or third product further comprises the major lipopolysaccharide antigen of a bacteria.
- 22. A method according to claim 1, wherein the inducing agent contained in the first, the second or the third product is the antigen.
- 23. A method according to claim 1, wherein the inducing agents contained in the second and third products are the same.
- 24. A method according to claim 1, wherein the inducing agents contained in the first, second and third products are the same.
- 25. A method according to claim 1, wherein the antigen is pathogenic for the mammal.
- 26. A method according to claim 11, which comprises administering a first inducing agent to said mammal by the systemic route; said first inducing agent being selected from the group consisting of the antigen and, provided the antigen is a protein, an expression cassette capable of expressing the antigen in a mammal.
- 27. A method according to claim 2, wherein the first product is formulated for parenteral administration.
- 28. A method according to claim 27, wherein the first product is formulated for subcutaneous, intradermal or intramuscular administration.

### First Hit

### **End of Result Set**



L3: Entry 10 of 10

File: DWPI

Jul 18, 2002

DERWENT-ACC-NO: 1999-009388

DERWENT-WEEK: 200258

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TITLE: Helicobacter-derived immunogen for use as vaccine - containing extract of Quillaja saponaria, cationic lipid and/or glyco-lipo-peptide as adjuvant

INVENTOR: GUY, B; HAENSLER, J

PRIORITY-DATA: 1997FR-0015732 (December 8, 1997), 1997FR-0005608 (April 30, 1997)

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PATENT-FAMILY:					
, AI	PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
	AU 750379 B	July 18, 2002		000	A61K039/106
	WO 9848836 A1	November 5, 1998	F	055	A61K039/106
	FR 2762787 A1	November 6, 1998		000	A61K039/39
	AU 9876584 A	November 24, 1998		000	A61K039/106
-	EP 979100 A1	February 16, 2000	F	000	A61K039/106
	BR 9809381 A	July 4, 2000	•	000	A61K039/106
	KR 2001020418 A	March 15, 2001		000	A61K039/106
	JP 2002505665 W	February 19, 2002		056	A61K039/106

INT-CL (IPC): A61 K 39/02; A61 K 39/106; A61 K 39/39; A61 K 45/00; A61 K 47/00; A61 P 31/04; A61 K 39/02; A61 K 47:26; A61 K 47:42

ABSTRACTED-PUB-NO: WO 9848836A

BASIC-ABSTRACT:

A composition (I) comprises: (A) an immunogenic agent derived from Helicobacter; and (B) at least one adjuvant chosen from (i) purified saponins from an extract of Quillaja saponaria; (ii) cationic lipids (or their salts) which are weak inhibitors of protein kinase C and have a structure including a lipophilic group derived from cholesterol, a carboxamide or carbamoyl linking group, a spacer arm consisting of a 1-20C alkyl chain and a cationic amine group (primary, secondary, tertiary or quaternary), provided that the lipids are not present in the form of liposomes when (I) contains neither (i) nor (ii); and (iii) glyco-lipo-peptides of formula (II). R1 = 1-50C alkyl (optionally unsaturated); X = -CH2-, -O- or -NH-; R2 = H or as R1; R3-R5 = H or acyl-CO-R6; R6 = 1-10C alkyl; R7 = H, 1-7C alkyl, hydroxymethyl, 1hydroxyethyl, mercaptomethyl, 2-(methylthio)-ethyl, 3-aminopropyl, 3-ureido-propyl, 3-guanidylpropyl, 4-aminobutyl, carboxymethyl, carbamoylmethyl, 2-carboxyethyl, 2carbamoylethyl, benzyl, 4-hydroxybenzyl, 3-indolylmethyl or 4-imidazolylmethyl; R8 = H or methyl; R9 = H, acetyl, benzoyl, trichloroacetyl, trifluoroacetyl, methoxycarbonyl, t-butoxycarbonyl or benzyloxycarbonyl; or R7 + R8 = -(CH2)3-.

USE - (I) is useful as a vaccine for the treatment or prevention of <u>Helicobacter</u> infections, e.g. H. <u>pylori</u> infections in humans (associated with gastric and duodenal ulcers, gastritis and gastric carcinoma). (I) induces an immune response of the T-helper 1 type (Th 1) against <u>Helicobacter</u> (claimed).

ADVANTAGE - (I) gives a strong Th 1 response on systemic administration and a degree of protection at least equivalent to that obtained using the mucosal route and a bacterial toxin adjuvant. Specifically the Th 1 immune response measured in the mouse gives IgG2a:IgG1 and IgG2a:IgA ELISA titre ratios of at least 1:100, preferably at least 1:2 (claimed).

ABSTRACTED-PUB-NO: WO 9848836A

EQUIVALENT-ABSTRACTS:

CHOSEN-DRAWING: Dwg.0/8